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(54) Title: GENE FOR INCREASED SOMATIC RECOMBINATION

(57) **Abstract:** The present invention relates to nucleic acids encoding polypeptides involved in homologous recombination, as well as vectors and host cells comprising the nucleic acids and polypeptides encoded by the nucleic acids. Also provided are methods for inducing somatic and/or meiotic homologous recombination in a cell, comprising modulating the expression or properties of one or more gene products selected from the group consisting of AtIno80, At3g57300, Rvb1 (At5g22330), Rvb21 (At5g67630), Rvb22 (At3g49830), At3g57290, AtArp5.1 (At3g12380), AtArp5.2 (At5g56180), AtArp5.3 (At3g60830) and AtArp8 (At5g43500), their homologues, fragments or derivatives. In particular, the methods can be used to increase gene targeting.